



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,045	10/24/2003	James W. Robins	11241-0031	1560
7590	10/17/2005		EXAMINER	
John F. Letchford, Esquire Archer & Greiner, P.C. One Centennial Square Haddonfield, NJ 08033-0968			KASTLER, SCOTT R	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/693,045
Filing Date: October 24, 2003
Appellant(s): ROBINS ET AL.

MAILED
OCT 17 2005
GROUP 1700

John F. Letchford
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 8/25/2005 appealing from the Office action mailed on 7/28/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

Art Unit: 1742

(8) Evidence Relied Upon

The following is a listing of the evidence (e.g., patents, publications, Official Notice, and admitted prior art) relied upon in the rejection of claims under appeal.

US 3,813,943	Fradeneck	06-04-1974
US 3,396,960	Maatsch	08-13-1968

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claims 1, 2, 4-11 and 13-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fradeneck in view of Maatsch. Fradeneck shows a metal making lance assembly, where the term “assembly” denotes components employed together, but does not require the mechanical attachment together of all of the components, including a lance barrel and tip including a nozzle attached to the barrel (13) for discharging gaseous or particulates into vessel (10), a sensor feed tube (16) accommodating the passage of a disposable sensor (21), where the feed tube (16) is external, coaxial, parallel to the axis of, separate and isolated from fluid communication with the nozzle of lance (13), the sensor being suitable for the measurement of bath temperature (see claim 3 for example), and where the sensors comprise a plurality of sensors (see col. 3 lines 33-50 for example) that are loaded into the tube (16) by loading means (17) including sensor gripping means, and including control and data receiver means (28, 69 and 70) meeting the requirements of instant claims 20-22, where a flow of pressurized gas is introduced into the sensor tube (16) (see col. 2 lines 59-65 for example), thereby showing all aspects of the above

Art Unit: 1742

claims except the disposition of the sensor and sensor feed tube within or carried by the lance barrel and connected to the lance tip. Maatsch teaches that at the time the invention was made, it was known in the lance art to arrange sensors (6) and attendant feed tubes (9, 11) inside of and carried by a lance barrel in order to more accurately monitor the reaction performance of the oxygen blowing process performed by the lance (1). Because improved accuracy of the monitoring of the lance blowing operation would also be desirable in Fradeneck, motivation to arrange the sensor feed tube (16) and sensor arrangement interiorly of the lance (13), in the manner taught to be advantageous by Maatsch, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

Claims 3 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fradeneck in view of Maatsch. As applied to claim 1 above, Fradeneck in view of Maatsch shows all aspects of the above claims except the disposition of the sensor exterior of the lance barrel, although sensors located either interiorly or exteriorly of the barrel, as long as in close proximity to the barrel, are seen to operate in substantially the same manner with substantially the same results. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because it has been well settled that where, as in the instant case, no new or unexpected result is shown to arise therefrom, motivation to shift the location of a part shown by the applied prior art (the sensor) to any other location in the apparatus system, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See *In re Japikse*, 86 USPQ 70, and MPEP 2144.04 VI C. In the instant case, absent any demonstrated new or unexpected result arising therefrom, motivation

Art Unit: 1742

to shift the location of the sensor shown by the combination of Fradeneck in view of Maatsch to any desired location, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made.

(10) Response to Argument

Appellant's argue that Fradeneck does not disclose mounting a sensor assembly on the barrel of a treatment lance. However, this argument is not convincing since Maatsch, properly combined with Fradeneck, is applied to teach that this feature would have been obvious to one of ordinary skill in the art at the time the invention was made. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant's further argument that Maatsch does not provide a proper link between Fradeneck and the instantly appealed claims because the sensor feed tube of Maatsch is not isolated and separate from fluid communication with the treatment material discharged from the lance is also not convincing because again, because as stated above, Fradeneck is cited to teach this feature and the rejection of the above claims is based upon a combination of the teaching of both Fradeneck (a sensor for use with a lance where the sensor is carried by a separate barrel serving to isolate the sensor from any treatment materials issuing from the lance barrel) and Maatsch (the desirability of placing the sensor within or near the lance barrel and carried by the lance barrel). Placement of the sensor lance barrel, (where the sensor lance barrel serves to isolate the sensor from the discharge of the dispensing lance) of Fradeneck within the lance as

Art Unit: 1742

taught to be desirable by Maatsch would result in a sensor disposed within a dispensing lance barrel where the sensor is separate and isolated from fluid communication with the material discharge from the dispensing lance.

Appellant's further argument that Maatsch teaches a lance arrangement that would not be effective because of distortions resulting from sensor interaction with the oxygen discharged from the lance is not convincing because as stated both above and in the final rejection, Fradeneck is cited to teach the desirability of encasing the sensor in a tube or lance body (16) in order to prevent interaction with materials dispensed from the treatment lance (13). Again, the final rejection is based upon the combination of what both Fradeneck and Maatsch, taken together fairly teach, i.e., employment of the improved sensor assembly (16) of Fradeneck, where the sensor is encased within a protective housing, or lance, as the sensor places within a lance as taught by Maatsch, in order to more closely monitor conditions near the lance injection location, as taught desirable by Maatsch.

Finally, appellant's argument that neither of Fradeneck or Maatsch fairly show or suggest placing the sensor exterior of the treatment lance barrel is not convincing because, as stated in the final rejection, sensors located either interiorly or exteriorly of the barrel, as long as in close proximity to the barrel, are seen to operate in substantially the same manner with substantially the same results. The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because it has been well settled that where, as in the instant case, no new or unexpected result is shown to arise therefrom, motivation to shift the location of a part shown by the applied prior art (the sensor) to any other location in the apparatus system, would have been a modification obvious to one of ordinary skill in the art at

Art Unit: 1742

the time the invention was made. See *In re Japikse*, 86 USPQ 70, and MPEP 2144.04 VI C. In the instant case, absent any demonstrated new or unexpected result arising therefrom, motivation to shift the location of the sensor shown by the combination of Fradeneck in view of Maatsch to any desired location, would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. Appellant has as yet, presented no showing, in proper form, of any new or unexpected results arising from placing the sensor tube exterior of the lance barrel.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Scott Kastler,

Primary Examiner, Art Unit 1742

Conferees:



CAROL CHANEY
SUPERVISORY PATENT EXAMINER



ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700